



Sprint Nextel

2001 Edmund Halley Drive

Reston, VA 20191

Office: (703) 433-8525 Fax: (703) 433-4142

Mobile: (703) 926-5933

October 17, 2007

Notice of Oral *Ex Parte* Communication

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W. Room TW-A325
Washington, DC 20554

Re: *Improving Public Safety Communications in the 800 MHz Band; Consolidating the 800 and 900 MHz Industrial/Land Transportation and Business Pool Channels Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems; Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for use by the Mobile Satellite Service, WT Docket No. 02-55, ET Docket No. 00-258, ET Docket No. 95-18*

Dear Ms. Dortch:

Michael Degitz, Lucinda Hutter Cavell, Richard Engelman and Trey Hanbury from Sprint Nextel Corporation (Sprint Nextel) met yesterday with Julius Knapp, Geraldine Matisse, Jamison Prime, Nick Oros, and Patrick Forrester of the Office of Engineering and Technology. We discussed continued progress in transitioning broadcast auxiliary service licensees above 2025 MHz and reviewed the attached presentation. If any questions arise concerning this filing, please contact me.

Sincerely,

Trey Hanbury, Esq.
Director, Sprint Nextel Corporation

CC: Julius Knapp, Geraldine Matisse, Jamison Prime, Nick Oros, Patrick Forrester

A yellow background with a faint map of the United States and concentric circles representing signal waves. In the center, there is a table titled "Sprint Nextel Spectrum".

Sprint Nextel Spectrum

| | | | |
|--------|--------|--------|--------|
| 800MHz | 900MHz | 1.9GHz | 2.5GHz |
| 800MHz | 900MHz | 1.9GHz | 2.5GHz |
| 800MHz | 900MHz | 1.9GHz | 2.5GHz |
| 800MHz | 900MHz | 1.9GHz | 2.5GHz |
| 800MHz | 900MHz | 1.9GHz | 2.5GHz |



Together with NEXTEL

Interference to News, Sports, Weather and Other Remote TV Programming

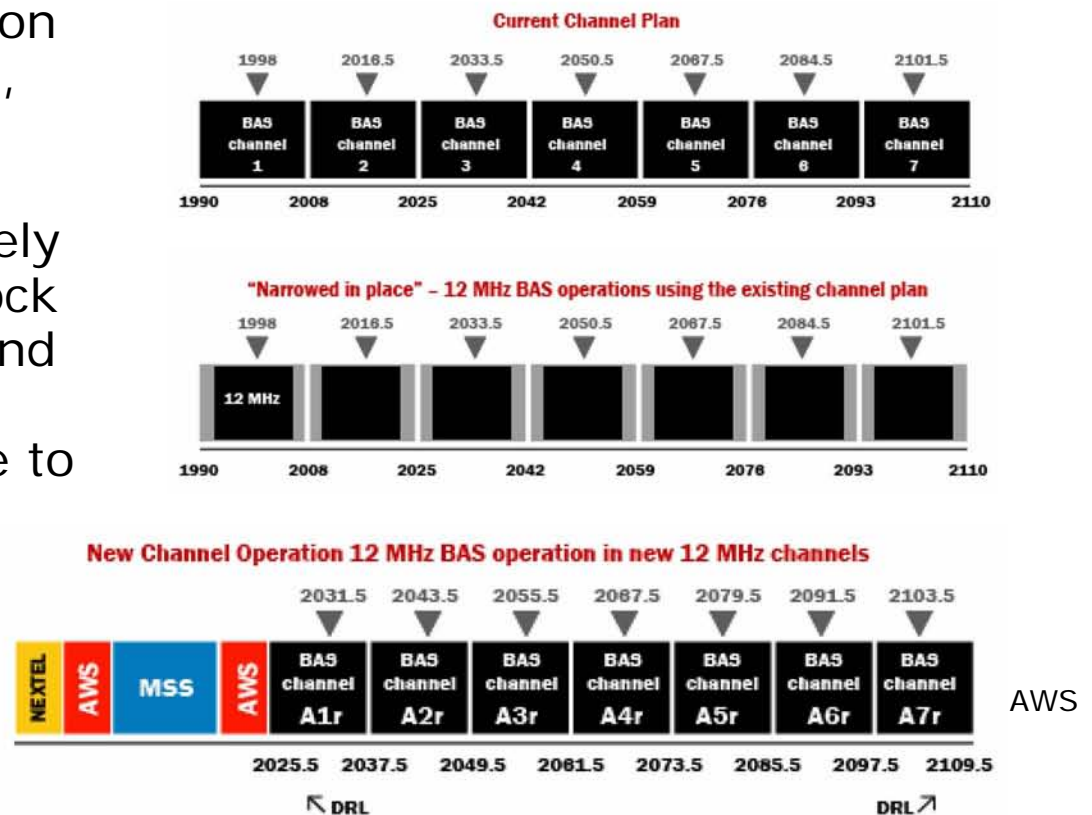
October 16, 2007

Broadcast Auxiliary Service and Advanced Wireless Service Base Station Band Are Adjacent Before, During and After Transition



New T-Mobile Assignment

- The spectrum that television broadcasters use for news, sports, weather and other remote television programming is immediately adjacent to the AWS A Block spectrum before, during and after the transition of the broadcast auxiliary service to its new configuration



Broadcasters – not Sprint Nextel – Choose Their BAS Equipment

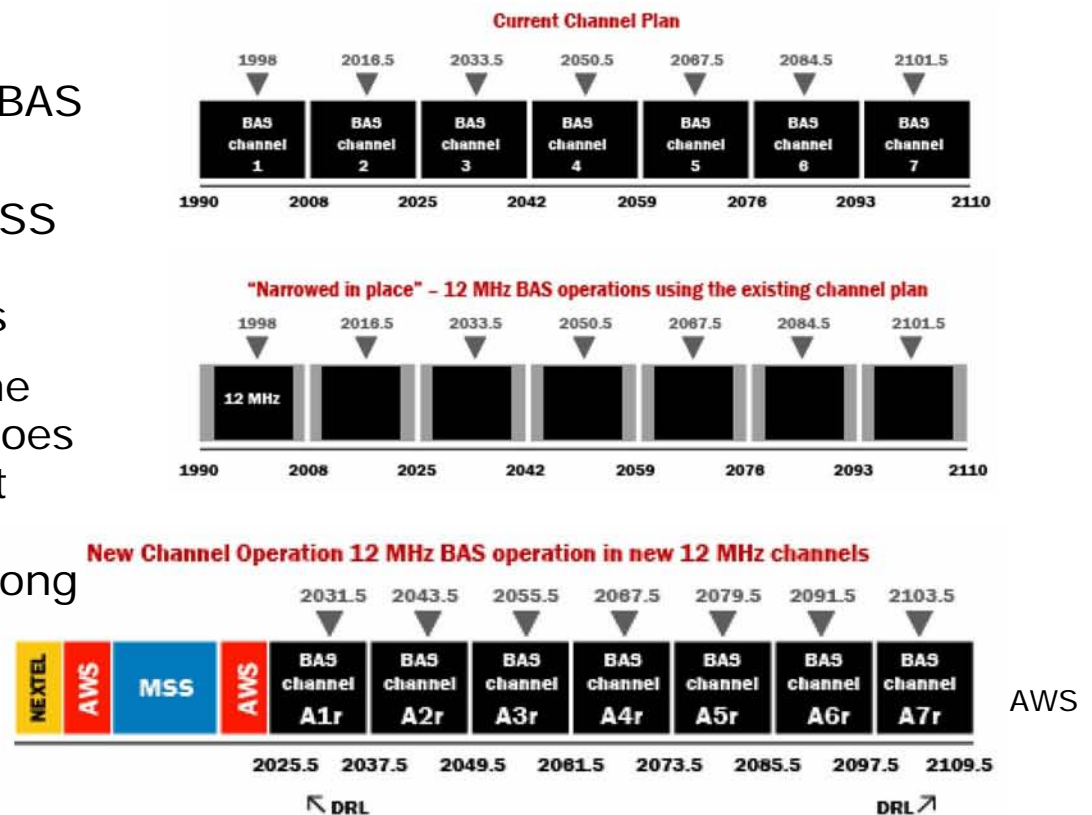


- Sprint Nextel, as part of the FCC's *800 MHz Order*, is responsible for funding the purchase and installation of digital BAS equipment that will permit the BAS band to be reconfigured

> The rules also provide for MSS operators to pay a pro rata share of the relocation costs

- Sprint Nextel does not select the broadcasters' equipment, nor does it maintain a specification sheet among devices from which broadcasters must choose: so long as the new replacement BAS facilities are comparable, broadcasters can choose any system by any manufacturer that they wish

New T-Mobile Assignment



New Digital BAS Receivers Have Excellent Signal Discrimination Characteristics



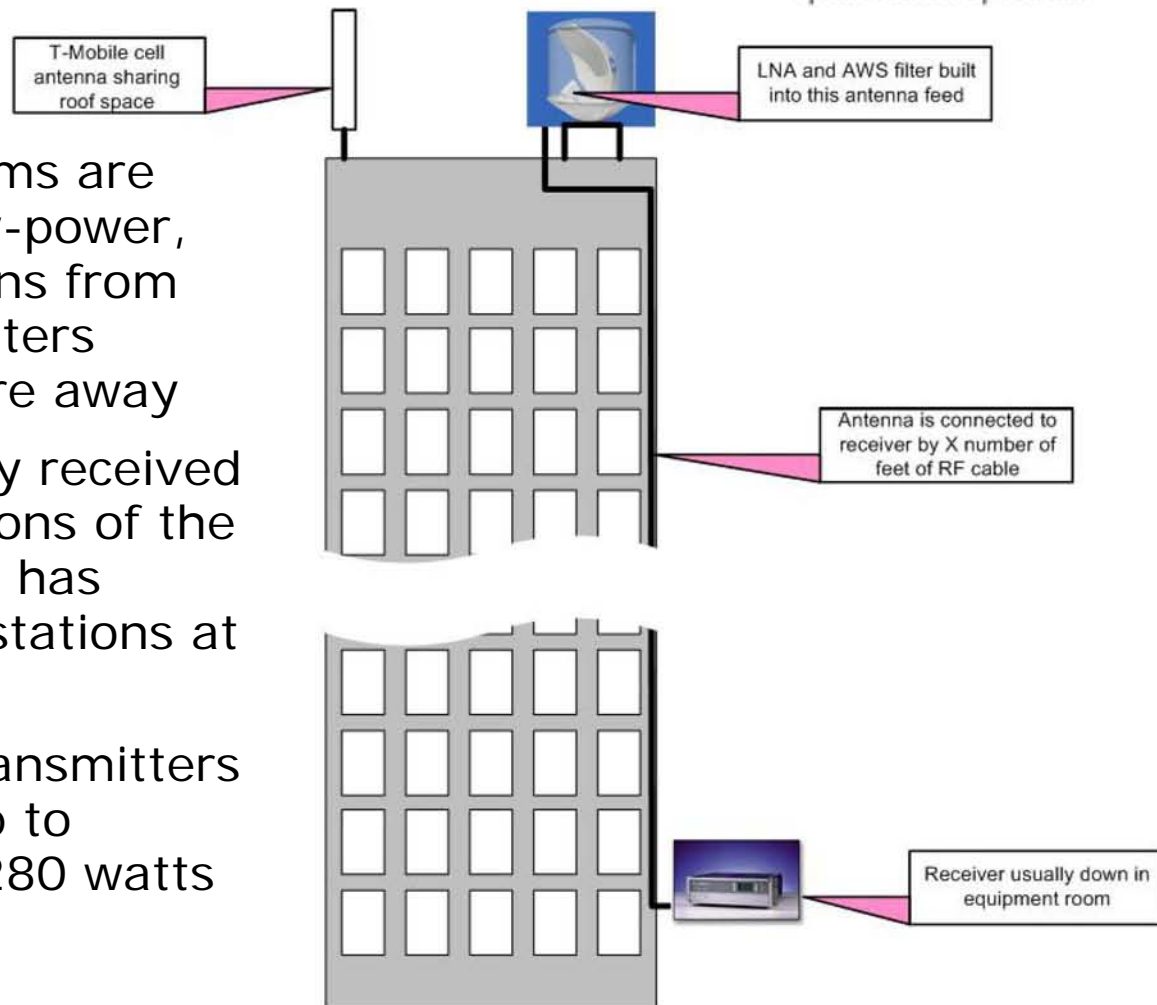
- BAS receivers have excellent discrimination characteristics.
- Even if two adjacent-channel BAS licensees orient their mobile transmit antennas to similar receive site locations, ample discrimination exists to identify the desired BAS signal and reject the undesired signals, even if the undesired BAS signal is closer and more powerful than the desired BAS signal.
- The band pass filters and channel filters easily handle this problem and the new equipment has much more discrimination ability in this respect than older BAS equipment



BAS Seeks Distant Low-Power Signals; T-Mobile Has Apparently Deployed AWS Transmitter Sites Near BAS Receivers



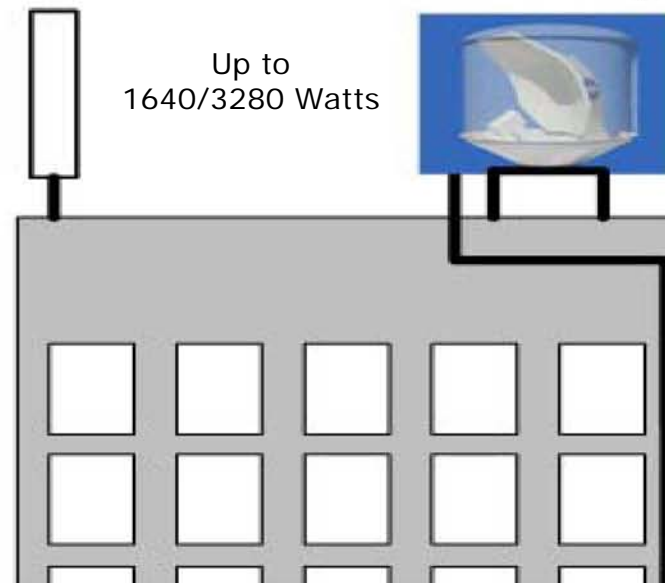
- TV BAS receiving systems are designed to receive low-power, 10-15 watt transmissions from remote mobile transmitters located 25 miles or more away
- T-Mobile, which recently received a license for large portions of the AWS A Block spectrum, has installed its AWS base stations at nearby locations
 - > AWS base station transmitters may operate with up to 1640 watts EIRP (3280 watts EIRP in rural areas)



T-Mobile Transmitters Appear To Be Overwhelming State-of-Art BAS Receivers



10-15 Watts



- T-Mobile's base stations appear to be overwhelming BAS receivers through brute force overload interference
 - > Cellularized operations typically use low-site, low-power base stations; unclear why T-Mobile is installing AWS base stations at high sites near BAS receivers

2003 AWS Report and Order Places Coordination Responsibility Squarely on AWS



- "We are concerned that base or fixed stations operating in the 2110-2155 MHz band, if situated too close to BAS/CARS receive stations, could cause interference to such stations [either] due to out-of-band emissions falling in the 2025-2110 MHz BAS band or due to overload of the receivers operating in that band."
- ***"We shall therefore require AWS licensees to coordinate the location of any base or fixed stations operating in the 2110-2155 MHz band with BAS/CARS licensees operating in their area. Before constructing and operating a base or fixed station, AWS licensees shall be required to determine the location and licensee of any BAS or CARS station authorized in their area of operation, and coordinate their planned stations with that licensee."***
- "We shall expect BAS/CARS and AWS licensees to work together to develop ways to mitigate interference, whether it be through locating their stations as far as possible from one another or by implementing one or more technical solutions. In the event that mutually satisfactory coordination agreements cannot be reached, licensees may seek the assistance of the Commission, and we may, at our discretion, impose requirements on one or both parties. ***While we conclude that interference can be avoided through coordination, AWS operators will be required to protect previously licensed BAS and CARS operations in the adjacent 2025-2110 MHz band.***"

See Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, Report and Order, 18 FCC Rcd. 25162 (2004)

Existing BAS Filters May Not Solve the Problem; New BAS Filters Could Be Costly and Impractical



- Interference resulting from T-Mobile's deployment of transmitters in close proximity to BAS receivers does not appear to involve normal out-of-band or adjacent channel interference, but brute force overload into BAS.
- Technical experts are unaware of any filter in existence today that could filter out high-power AWS adjacent-channel transmissions
- A BAS receive filter capable of reducing high-power brute force overload interference likely would have to be physically large to accommodate the cavities necessary to reduce AWS signal strength
- Moreover, any such filter would have to be installed before the low noise amplifier, which is located on the small feed horn in front of the BAS receive antenna



To avoid BAS system redesign, feed horn would likely have to accommodate as-yet apparently undeveloped filter



High-Power
Adjacent Channel
AWS Base Station
Transmit



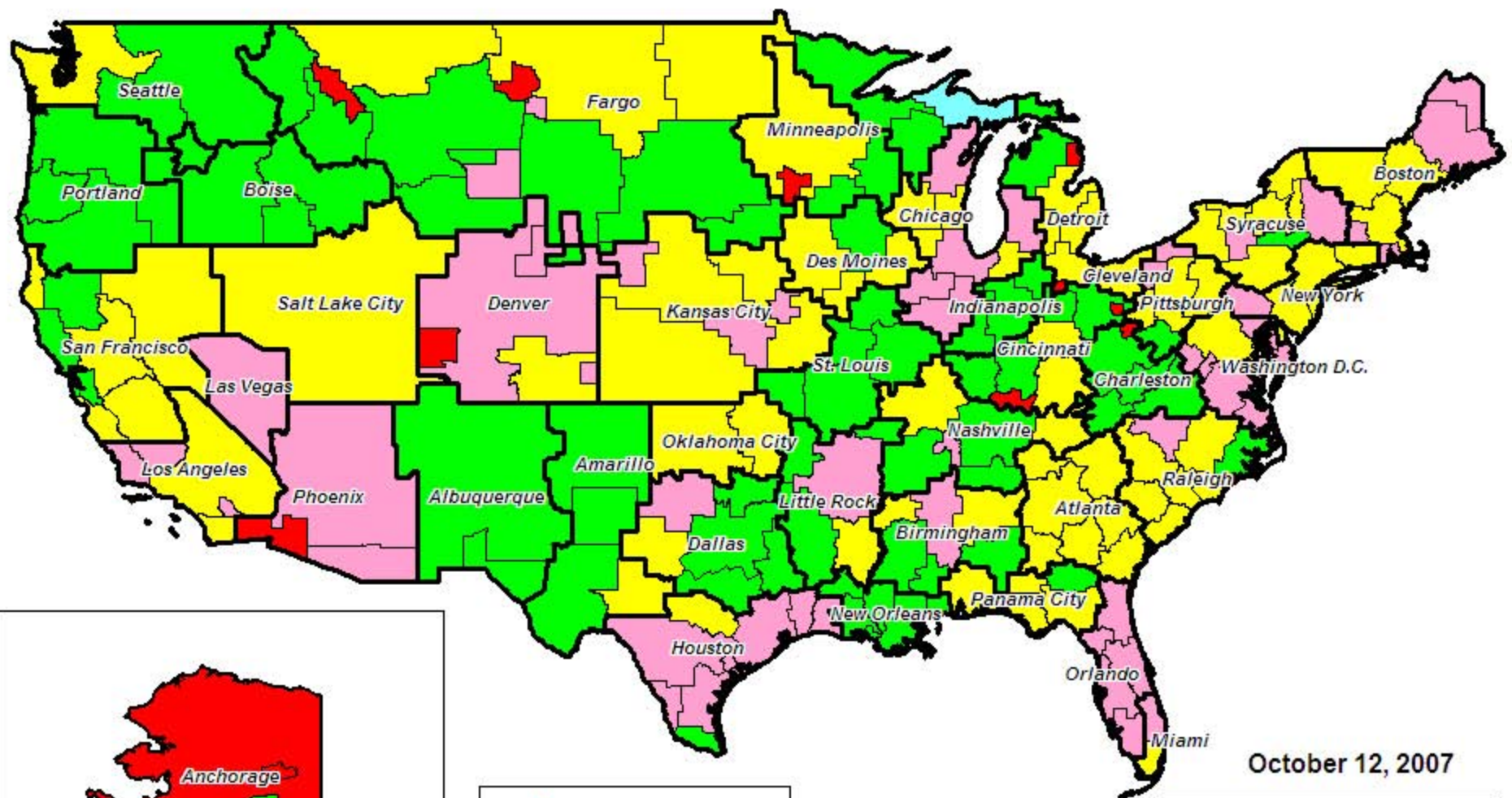
Low Power, On-Channel
Remote BAS ENG
Transmit

Sprint Nextel Will Work with T-Mobile, but Solving New AWS Interference to BAS is Not an Issue of Comparable BAS Facilities



- If AWS licensees choose to operate on channels adjacent to BAS with high power or in physical proximity to BAS receive sites, or both, AWS licensees bear the burden of solving the interference issues they create.
- Sprint Nextel is willing to administer its BAS relocation efforts in cooperation with any concurrent activity by AWS A Block licensees that seeks technical solutions to mitigate the harmful effects of newly installed AWS base station transmitters on BAS receivers so long as this activity does not result in additional costs or delay to the BAS transition.
- While not beyond current technical knowledge, developing a large, powerful filter to prevent high-powered AWS operations from causing harmful interference into nearby BAS receivers would likely be expensive, inefficient, and time consuming.
 - > No BAS equipment deployed today can accommodate a large filter inside existing housings.
 - > The as-yet undeveloped BAS equipment designed to mitigate AWS high-power brute force overload emissions would likely have to be installed *outside of* existing antenna housings.
 - > As a result, BAS licensees – assuming they have the physical space, loading capacity, lease rights, and requisite zoning approvals – likely would have to reconfigure their existing BAS receive sites by striping out the low noise amplifier from the feed horn, cabling the antenna to a separate box for the new LNA located outside of the antenna housing, and then installing a large filter in front of the LNA with its own seals, connectors, and lines.
 - > Redesigning BAS systems could introduce numerous inefficient new elements that could decrease BAS system performance such that many areas easily within range of the television station's BAS system prior to the redesign could no longer transmit live news, sports, weather, or emergency reports after the redesign has occurred.

2 GHz Relocation Progress by DMA



October 12, 2007

Percentage of Relocation Complete

- 100% - Complete
- 66-83% - Equipment Installation
- 50-66% - FRA Execution
- 33-50% - Deal Package
- 16-33% - Lock Inventory
- 0-16% - Inventory